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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,081	08/28/2003	Hisayuki Shinohara	204552029500	7213
25227	7590	10/05/2005	EXAMINER FLORES RUIZ, DELMA R	
MORRISON & FOERSTER LLP 1650 TYSONS BOULEVARD SUITE 300 MCLEAN, VA 22102			ART UNIT 2828	PAPER NUMBER

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/650,081

Applicant(s)

SHINOHARA ET AL.

Examiner

Delma R. Flores Ruiz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-13 and 15-16 is/are rejected.
- 7) ☒ Claim(s) 6 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/29/05; 3/24/05; 8/28/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 08/29/2005; 03/24/2005, and 08/28/2003 have been considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 – 4, 7 – 12 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Katayama (6,594,206).

Regarding claim 1, Katayama discloses a semiconductor laser device comprising: a semiconductor laser (see Figs. 5, and 15 Character 1 and see Fig. 19, Character 62) for emitting laser light toward an object to be irradiated; a diffracting

section (see Figs. 5, 15, Character 3 and see Fig. 19 Character 64, Column 24, Line 3 – 6) for diffracting the laser light reflected on the object according to a polarization direction of the reflected laser light to deviate the reflected laser light from a direction toward the semiconductor laser.

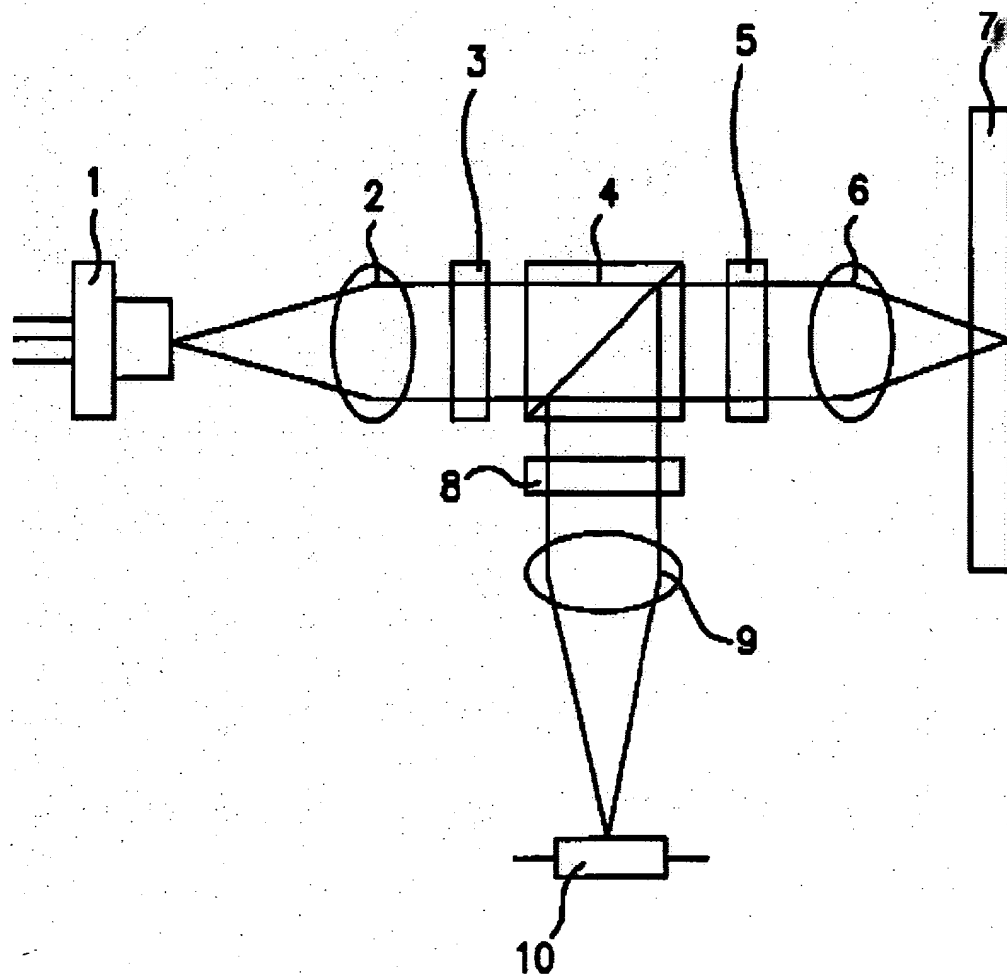
Regarding claim 2, Katayama discloses a hologram device (Fig. 19, Character 65) having a signal hologram; and a light-receiving device (see Fig. 19, Character 62), wherein the laser light emitted from the semiconductor laser (see Fig. 19, Character 62) is applied to the object to be irradiated (see Fig. 19, Character 7) by way of the signal hologram, the laser light reflected on the object (see Fig. 19, Character 7) is diffracted by the hologram device, and the diffracted laser light is received by the light-receiving device (see Fig. 19, Character 62, Column 23, Lines 30 – 67 and Column 24, Lines 1 - 30).

Regarding claim 3, Katayama discloses the diffracting section is comprised of a polarizing diffraction grating, the polarizing diffraction grating is constructed so that a diffraction efficiency of the diffracted light rays other than zero-order diffracted light is approximately zero percent with respect to light that has a first polarization direction, and that a diffraction efficiency of the diffracted light of the zero-order diffracted light is approximately zero percent with respect to light that has a second polarization direction

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perpendicular to the first polarization direction (Column 9, Lines 14 – 24, and Column 24, Lines 1 – 30) .

Discloses a Katayama Fig. 5



Semiconductor laser = 1

Splitter = 4

Hologram device= 8

Lens= 2, 6 and 9

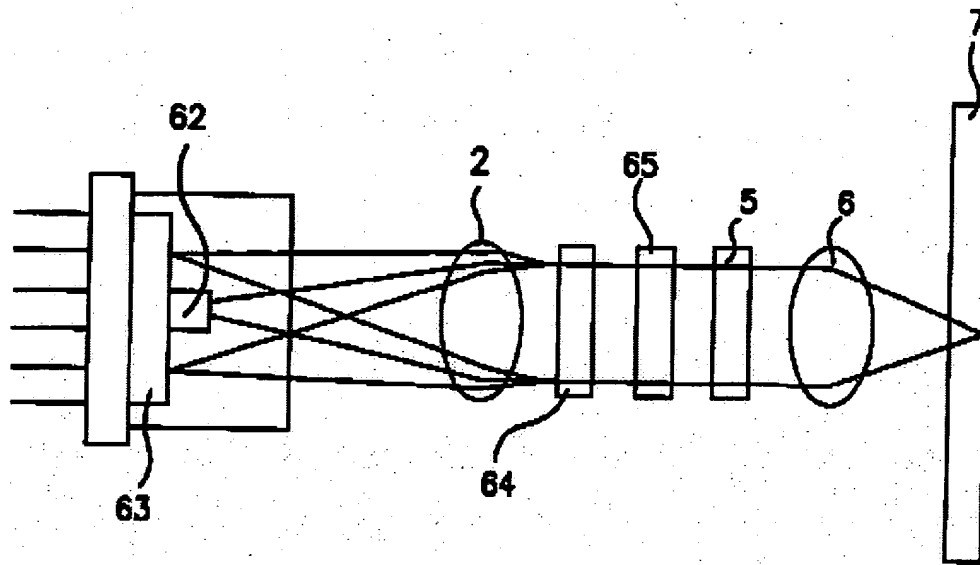
Quarter wavelength = 5

Photodetector = 10

Polarization diffraction device = 3

Optical disk = 7

Discloses a Katayama Fig. 19



Photodetector = 63

Hologram device = 65

Semiconductor = 62

Quarter wavelength = 5

Lens = 2 and 6

Optical disk = 7

Polarization diffraction device = 64

Regarding claim 4, Katayama discloses a quarter-wavelength plate (see Figs. 5 and 15 Character 5), wherein the diffracting section (see Figs. 5 and 15, Character 3) and the quarter-wavelength plate (see Figs. 5 and 15 Character 5) are arranged in order toward the semiconductor laser (see Figs. 5 and 15, Character 1 and see Fig. 19, Character 62).

Regarding claim 7, Katayama discloses the diffracting section (see Fig. 19, Character 64) is comprised of a polarizing diffraction grating (Column 24, Lines 3 – 6), and the signal hologram and the polarizing diffraction grating (see Fig. 19, Character 64) are arranged on an optical axis of an optical path of the reflected laser light toward a light-emitting point of the semiconductor laser (see Fig. 19).

Regarding claim 8, Katayama discloses the diffracting section is comprised of a polarizing diffraction grating (see Figs. 5 and 15, Character 3 and See Fig. 19 Character 64, Column 24, Lines 3 – 6) formed by a linear grating with a roughly equal pitch (Column 9, Lines 49 – 54 and Column 19, Lines 20 – 25) .

Regarding claim 9, Katayama discloses a diffracting section is comprised of a polarizing diffraction grating (see Figs. 5 and 15, Character 3 and See Fig. 19 Character 64, Column 24, Lines 1 – 30), and the diffracted light diffracted by the signal hologram does not pass through the polarizing diffraction grating (see Figs. 5, 15, 19).

Regarding claim 10, Katayama discloses the diffracting section is comprised of a polarizing diffraction grating (see Figs. 5 and 15, Character 3 and See Fig. 19 Character 64, Column 24, Lines 1 – 30), and a quarter-wavelength plate (see Figs. 5, 15, and 19, Character 5) is provided in the hologram device.

Regarding claim 11, Katayama discloses the diffracting section is comprised of a polarizing diffraction grating (See Fig. 19 Character 64, Column 24, Lines 3 – 6), and the hologram device (see Fig. 19, Character 65) is an optical member that integrally has the signal hologram and the polarizing diffraction grating (see Figs. 5 and 15, Character 3 and See Fig. 19 Character 64, Column 24, Lines 3 – 6).

Regarding claim 12, Katayama discloses the diffracting section is comprised of a polarizing diffraction grating (see Figs. 5 and 15, Character 3 and See Fig. 19 Character 64, Column 24, Lines 3 – 6), and the signal hologram and the polarizing diffraction grating are provided as separate optical members (see Figs. 5, 15 and 19, Column 23, Lines 31 – 67 and Column 24, Lines 1 – 30) .

Regarding claim 16, Katayama discloses a photodetector (see Figs. 5 and 15, Character 10) for detecting the laser light reflected from the object to be irradiated.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katayama (6,594,206) in view of Tajiri, et al (5,727,009)

Regarding claim 5, Katayama discloses the claimed invention except for a cap having window, wherein the polarizing diffraction grating is attached to the window. Tajiri teaches a cap have a window, wherein the polarizing diffraction grating is attached to the window (see Fig. 24). It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a cap have a window, wherein the polarizing diffraction grating is attached to the window, for the motivation of pass the light beam since it has been well known in the art back in Tajiri ('009) (see Fig. 24, 30, Column 21, Lines 45 – 55 and Column 30, Lines 1 – 22) .

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katayama (6,594,206) in view of Yamazaki (5,608,695).

Regarding claim 13, Katayama discloses the claimed invention except for packaging. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ packaging to protect the system of environment, dust,

etc.”, since it has been well known in the art back in Yamazaki ‘ 695, (see Fig. 6, Character 21, the reference call unit).

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katayama (6,594,206) in view of Yanagawa et al (6,925,039).

Regarding claim 15, Katayama discloses an optical pickup device comprising: the diffracting section is comprised of a polarizing diffraction grating (see Figs. 5 and 15, Character 3 and See Fig. 19 Character 64, Column 24, Lines 3 – 6), an optical system (see Figs. 5, 15 and 19, Characters 2, 4, 5 and) guiding the laser light emitted from the semiconductor laser to an optical recording medium (see Figs. 5, 15 and 19, Character 7, Abstract, Column 3, Lines 29 – 45) that serves as the object to be irradiated (see Figs. 5, 15, and 19, Character 7) and guiding the light reflected from the optical recording medium to the polarizing diffraction grating.

Katayama discloses the claimed invention except for the optical system has a phase difference plate for changing a state of polarization of the light emitted from the semiconductor laser from linearly polarized light into circularly polarized light or from circularly polarized light into linearly polarized light. Yanagawa teaches a optical system has a phase difference plate for changing a state of polarization of the light emitted from the semiconductor laser from linearly polarized light into circularly polarized light or from

circularly polarized light into linearly polarized light. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ optical system has a phase difference plate for changing a state of polarization of the light emitted from the semiconductor laser from linearly polarized light into circularly polarized light or from circularly polarized light into linearly polarized light. The motivation of the polarization beam splitter of the laser beam entering it to pass through it and the polarizer panel transforms the linear polarization of the passing laser beam into circular polarization. since it has been well known in the art back in Yanagawa '039, see Column 5, Lines 47 – 63.

Allowable Subject Matter

Claims 6, 14, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delma R. Flores Ruiz whose telephone number is (571) 272-1940. The examiner can normally be reached on M - F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Sun Harvey can be reached on (571) -272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Delma R. Flores Ruiz
Examiner
Art Unit 2828


JAMES MENEFEE
 Min Sun Harvey
Supervisor Patent Examiner
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DRFR/MH
September 22, 2005